AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

1. (Currently amended) A method for multicasting a data cell received in a switch structure, comprising:

registering an address and priority corresponding to said data cell at an ingress port in a memory cell, the memory cell being addressable by the priority;

controlling a flow of said data cell;

asserting a multicast service request for said data cell using the memory cell;

in response to said asserting, granting said multicast service request;

arranging a multicast fan-out for said data cell; and

in response to said arranging, configuring said switch structure.

2. (Original) The method as recited in Claim 1 wherein said switch structure comprises a crossbar switch.

3. (Original) The method as recited in Claim 1 further comprising granting service to said ingress port, wherein said granting service is performed upon said granting said multicast service request.

4. (Original) The method as recited in Claim 3 wherein said granting service is performed before said arranging.

5. (Original) The method as recited in Claim 1 wherein said data cell has service priority over a unicast cell.

6. (Original) The method as recited in Claim 1 wherein said data cell comprises one of a plurality of multicast cells and wherein said granting further comprises:

comparing a request priority among said plurality of multicast cells; and

responsive to said comparing, selecting said data cell.

7. (Original) The method as recited in Claim 1 wherein said arranging comprises:

generating a request signal for said multicast fan-out;

asserting a transfer request to a plurality of affected egress ports; and

in response to said asserting a transfer request, giving by each of said plurality of egress ports a corresponding grant signal to said ingress port.

8. (Original) The method as recited in Claim 7 further comprising:

determining that said data cell is not departing, wherein said determining is performed after said giving;

in response to said determining, further determining that a unicast cell is ready for launch; and

in response to said further determining, launching said unicast cell.

9. (Original) The method as recited in Claim 1 further comprising:

determining that a unicast iteration is in progress; and

in response to said determining, preventing generation of a request signal by said ingress port while said unicast iteration is in progress; wherein said determining and said preventing are performed before said controlling.

10. (Original) The method as recited in Claim 1 wherein said address further corresponds to a location within an ingress queue of said switch structure at which a payload corresponding to said data cell is stored.

11. (Currently amended) A system for multicasting a data cell received in a switch structure, comprising:

a multicast controller for performing a multicast control function; and

a multicast grant generator coupled to said multicast controller for granting multicast service to said data cell; wherein said system performs a process for multicasting a data cell received in a switch structure, said process comprising:

registering an address and priority corresponding to said data cell at an ingress port in a memory cell, the memory cell being addressable by the priority;

controlling a flow of said data cell;

asserting a multicast service request for said data cell using the memory cell;

in response to said asserting, granting said multicast service request;

arranging a multicast fan-out for said data cell; and

in response to said arranging, configuring said switch structure.

12. (Original) The system as recited in Claim 11 wherein said switch structure comprises a crossbar switch.

13. (Original) The system as recited in Claim 11 wherein said multicast controller comprises:

a multicast storage queue for storing said data cell; and

a multicast storage controller coupled to said multicast storage queue for controlling the flow of said data cell within said multicast storage queue.

14. (Original) The system as recited in Claim 13 wherein said multicast storage queue comprises a plurality of registers.

15. (Original) The system as recited in Claim 14 wherein said plurality comprises 32.

16. (Original) The system as recited in Claim 13 wherein said multicast storage controller reshuffles a service order within said multicast storage queue upon receiving said data cell.

17. (Original) The system as recited in Claim 13 wherein said multicast storage controller asserts a multicast based priority over a unicast data cell.

18. (Original) The system as recited in Claim 13 wherein said multicast storage controller makes a priority based service request to said multicast grant generator: wherein, responsive to said service request, said multicast grant generator provides a service grant; and wherein, responsive to said service grant, said multicast storage controller extracts said data cell from said multicast storage queue for service.

19. (Original) The system as recited in Claim 18 wherein said multicast grant generator updates a preference pointer.

20. (Original) The system as recited in Claim 11, further comprising a multicast request generator register for generating a request signal to effectuate multicast fan-out of said data cell.

21. (Original) The system as recited in Claim 11, further comprising a read out and transfer register for generating a read signal to effectuate transfer of a payload corresponding to said data cell.

22. (Currently amended) A method for multicasting a multicast cell, comprising:

recording said address 'i' and a priority 'p' in a multicast storage register set at a port 'n', the storage register being addressable by the priority;

re-shuffling a service order in said register set based upon said priority 'p';

controlling a flow of said multicast cell in said register set;

asserting a multicast service request through the storage register;

in response to said asserting, giving a multicast service grant;

in response to said giving a multicast service grant, generating a plurality of request signals corresponding to said fan-out;

in response to said generating, making a transfer request to a plurality of egress ports corresponding to said fan-out;

in response to said making, giving a plurality of grant signals to said port 'n';

correspondingly configuring said crossbar switch to transfer said multicast cell; and

in response to said configuring, transferring said payload.

23. (Original) The method as recited in Claim 22, further comprising, in response to said giving a multicast service grant, changing a preference pointer value to correspond to said port 'n'.

24. (Original) The method as recited in Claim 22 wherein said multicast cell comprises a first multicast cell and wherein said giving a multicast service grant comprises:

comparing said priority 'p' to a priority corresponding to a second multicast cell; and

selecting said first multicast cell accordingly.

25. (Original) The method as recited in Claim 22 wherein said multicast cell has a service priority over a unicast cell.

26. (Original) The method as recited in Claim 22 further comprising:

determining that said multicast cell is not departing, wherein said determining is performed after said giving a plurality of grant signals to said port 'n';

in response to said determining, further determining that a unicast cell is ready for launch; and

in response to said further determining, launching said unicast cell.